AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-25 (cancelled)

26. (currently amended) A display device with a touch sensor comprising:

(a) a transparent cover plate,

(b) a transparent support plate and at least one photodetector that is mounted on the support plate and that has a photosensitive solid angle range so that the support plate lies in the photosensitive solid angle range,

(c) an electrochromic cell or a liquid crystal cell located between the transparent cover plate and the transparent support plate,

(d) a radiation source arranged on at least one end face of the transparent cover plate so that light of the radiation source can enter and illuminate the cover plate and the power of the produced radiation varies periodically over time at a particular frequency so that the time-varying electric signal issued by the photodetector is further processed so that only the part of the signal time-varying at approximately the same said frequency is retained.

27. (previously presented) The display device according to Claim 26, wherein the cover plate and the support plate are joined together by a ring seal to form a cell, and an electrochromic medium is located in the cell volume, and the plates are provided with a transparent electrically conductive coating on their sides facing the electrochromic medium.

28. (previously presented) The display device according to Claim 26, wherein the liquid crystal cell comprises a transparent top plate and a transparent bottom plate that are joined together by a ring seal and between in which the liquid crystals are located, the sides of the plates, which face one another is provided with a transparent electrically conductive coating, and with an orienting layer, and the sides of the plates that are remote from one another is provided with a polarization film.

29. (previously presented) The display device according to Claim 26, wherein the electrochromic cell or the liquid crystal cell has a coating on the bottom plate that predominantly reflects visible light while it is predominantly transparent to the light emitted by the radiation source.

30. (previously presented) The display device according to Claim 26, wherein the electrochromic cell or the liquid crystal cell has a coating on the bottom plate that optionally contains a location transparent to the light from the radiation source at the center of the photosensitive solid angle range of the photodetector.

31. (previously presented) The display device according to Claim 26, wherein the electrochromic cell or the liquid crystal cell has a semi-transmissive and semireflecting coating on the bottom plate.

32. (previously presented) The display device according to one Claim 28, wherein the electrochromic medium or the liquid crystal medium is two-dimensionally illuminated from the side facing the support plate.

33. (previously presented) The display device according to Claim 32, wherein (i) the two-dimensional illumination is carried out through an optically transparent grid plate that is arranged between the bottom plate and the support plate, (ii) a light source is arranged on at least one of the end faces of the grid plate and the grid plate having, on the side remote from the support plate, an optically refractive grid like surface structure for positionally metered emergence of light from the interior of the plate, and (iii) a scattering layer serving as an illumination surface is arranged on or over this side.

34. (previously presented) The display device according to Claim 33, wherein the grid density of the surface structure of the grid plate becomes greater with increasing distance from the light source.

35. (previously presented) The display device according to Claim 33, wherein the grid plate is identical to the support plate or to the bottom plate of the electrochromic cell or of the liquid crystal cell.

36. (previously presented) The display device according to Claim 26, wherein the cover plate has a thickness of at least 0.05 mm.

37. (previously presented) The display device according to Claim 26, wherein the cover plate has a refractive index of at least 1.5.

38. (previously presented) The display device according to Claim 26, wherein an intermediate layer is located between the top plate of the electrochromic cell or of the liquid crystal cell and the cover plate.

39. (previously presented) The display device according to Claim 38, wherein the intermediate layer has a refractive index that is less than the refractive index of the cover plate.

40. (previously presented) The display device according to Claim 38, wherein the intermediate layer comprises air or LTV radiation-polymerizable mixtures of polyfunctional (meth)acrylic acid derivatives, monofunctional (meth)acrylates or suitable photoinitiators, or of solid materials produced using a solgel process and having a porosity of more than 50% based on silicates, aluminates and other binary or ternary systems.

41. (previously presented) The display device according to Claim 26, wherein the bottom plate of the electrochromic cell or of the liquid crystal cell is identical to the support plate and/or the top plate is identical to the cover plate.

42. (previously presented) The display device according to Claim 26, wherein the radiation source has an emission maximum at a wavelength of more than 680 nm.

43. (previously presented) The display device according to Claim 26, wherein the end face illuminated by the radiation source is roughened so as to b weakly scattering.

44. (previously presented) The display device according to one Claim 26, wherein at least one and at most three end faces of the cover plate are coated with an optically reflecting material.

45. (previously presented) The display device according to Claim 44, wherein the optically reflecting material is gold, silver, copper, nickel or aluminum, and mixtures thereof, and the layers are produced by evaporation coating, sputtering, CVD or adhesive bonding of metal-coated films.

46.(previously presented) The display device according to Claim 26, wherein a plurality of photodetectors are fitted on the support plate, a specific region of the cover plate, in which a region is uniquely assigned to the photodetector, lying in the photosensitive solid angle range of each photodetector.

47. (previously presented) The display device according to Claim 26, wherein a unit for processing the electrical signal is connected downstream of each photodetector.

48. (currently amended) A method for touch recognition in a display device comprising the steps of

(a) providing a transparent cover plate lying on a photosensitive solid angle range,

(b) providing a transparent support plate and at least one photodetector that is mounted on the support plate having a photosensitive solid angle range so that the support plate lies in the photosensitive solid angle range,

(c) providing an electrochromic cell or a liquid crystal cell located between the transparent cover plate and the transparent support plate,

(d) providing a radiation source arranged on at least one end face of the transparent cover plate so that light of the radiation source can enter and illuminate the cover plate, and

~~wherein the produced radiation power varies periodically with time at a particular frequency so that an also time-varying electric signal issued by the photodetector is further processed so that only the part of the signal time-varying at approximately the same said frequency is retained.~~

wherein the power of the produced radiation of the radiation source varies periodically at a particular frequency so that the time-varying electric signal emanated by the photodetector is further processed so as to only retain the time-varying part of the signal which varies at approximately the same frequency.

49.(previously presented) The method according to Claim 48, wherein the relative width of the frequency band accepted during the further processing in the signal from the photodetector around the frequency is less than 0.1.

50.(previously presented) The method according to Claim 48, wherein the touch sensor can be switched off fully or for a limited time and, after a predetermined time, switches itself on again or can be switched on again by a specific signal sequence.